letter of transmittal

KANSAS CITY TESTING & ENGINEERING, LLC

1308 Adams Street
Kansas City, KS 66103
Ph (913) 321-8100
Fax (913) 321-8181

DATE 2/23/18 JOB NO. R20-17-261

ATTN: JAKE LOVELESS

TO: GRIFFIN RILEY INVESTMENTS LLC
120 SE 30TH ST
LEE'S SUMMIT MO 64082

RE: RESIDENCES @ ECHELON

WE ARE SENDING YOU

X ATTACHED ____ UNDER SEPARATE COVER ____ THE FOLLOWING ITEMS:

___ AGGREGATE REPORT	___ CONCRETE REPORT	___ PROPOSAL
___ ASPHALT REPORT	___ FOUNDATION REPORT	___ SOILS REPORT
X AS NOTED	___ INVOICE	___ OTHER

COPIES	DATE	NO.	DESCRIPTION
1			SITE OBSERVATION PERFORMED 2/13 - 2/16

THESE ARE TRANSMITTED AS CHECKED BELOW:

___ FOR CHECKING	___ FOR REVIEW / COMMENT	X FOR FILES & INFO.
___ FOR YOUR USE ON JOB	___ APPROVED AS NOTED	
___ AS REQUESTED	___ APPROVED AS SUBMITTED	

REMARKS:

COPY TO:
jake@griffinriley.com
tjwatreas@lukedraily.com
cbeverlin@bdc-engrs.com
thauschild@nspjarch.com
mschlicht@es-kc.com

matthew.munger@cityofLS.net
srunyan@lukedraily.com

BY: JIM BYRNES
SR PROJ MANAGER

KANSAS CITY
TESTING & ENGINEERING, LLC

Kansas City Testing & Engineering, LLC
1308 Adams Street
Kansas City, KS 66103
Phone 913.321.8100
Fax 913.321.8181

SITE OBSERVATION

CLIENT: GRIFFIN RILEY INVESTMENTS, LLC
ATTN: JAKE LOVELESS
120 SE 30TH STREET
LEE'S SUMMIT MO 64082

PROJECT: THE RESIDENCES @ ECHELON
MO 291 & 50
LEE'S SUMMIT, MO

SERVICES:

PROJECT NO.: R20-17-261
REPORT NO.: K22232
DATE OF SERVICE: 02/13/2018
AUTHORIZATION: JAKE LOVELESS
REPORT DATE: 02/19/2018

The existing grade was evaluated for the presence of frost at three locations across the site. Test pits were dug and a 3" frost layer was indicated.

Technician: ANDREW WILSON, SR. ENGR. TECHNICIAN

Report Distribution:

(1) cbeverlin@bdc-engrs.com
(1) jake@griffinriley.com
(1) matthew.munger@cityofLS.net
(1) mschlicht@es-kc.com
(1) srunyan@lukedraily.com
(1) thauschild@nspjarch.com
(1) tjwatreas@lukedraily.com

KANSAS CITY TESTING & ENGINEERING,

JIM BYRNES, R.G.
PROJECT MANAGER

KANSAS CITY TESTING & ENGINEERING, LLC

Kansas City Testing & Engineering, LLC
1308 Adams Street
Kansas City, KS 66103
Phone 913.321.8100
Fax 913.321.8181

REPORT OF IN-PLACE DENSITY

CLIENT: GRIFFIN RILEY INVESTMENTS, LLC
ATTN: JAKE LOVELESS
120 SE 30TH STREET
LEE'S SUMMIT MO 64082

PROJECT NO.: R20-17-261
REPORT NO.: K22281
DATE OF SERVICE: 02/14/2018
AUTHORIZATION: JAKE LOVELESS
REPORT DATE: 02/19/2018

PROJECT: THE RESIDENCES @ ECHELON
MO 291 & 50
LEE'S SUMMIT, MO

SERVICES: Perform in-place density and moisture content tests to determine the degree of field compaction.

PROJECT DATA

CONTRACTOR: LUKE DRAILY CONST

	DENSITY	MOISTURE
METHOD OF TEST:	ASTM D6938	ASTM D3017
SPECIFICATION:	95% Min	-1 to +3% of Opt

GAUGE: Troxler 3440
GAUGE SERIAL NO.: 15277
STANDARD COUNTS
MOISTURE - CURRENT: 715 PREVIOUS: 713
DENSITY - CURRENT: 1482 PREVIOUS: 1485
TEST MODE: Direct Transmission
PROBE DEPTH: 8

M/D #	TEST OF	MATERIALS	MOISTURE/DENSITY RELATIONS OPTIMUM MOISTURE %	MAXIMUM DENSITY pcf	REFERENCE REPORT
1.	STANDARD PROCTOR	GRAY SILTY CLAY	21.0	100.4	K21465
2.	STANDARD PROCTOR	BROWN-GRAY SILTY CLAY	22.1	99.9	K21467
3.	STANDARD PROCTOR	REDDISH BROWN SILTY CLAY	23.1	96.7	K21466

REPORT OF TESTS

TEST NO	LOCATION	PROBE DEPTH	LIFT/ ELEV	M/D NO	FIELD MOISTURE (%)	OPTIMUM MOISTURE (%)	FIELD DENSITY (pcf) WET	DRY	MAXIMUM DENSITY (pcf)	DENSITY (% max)
1.	STORM SEWER LINE 7: 60' W of inlet 7-5	8	4.5 bg	1	23.9	21.0	118.9	96.0	100.4	96
2.	20' W of inlet 7-5	8	4' bg	1	21.3	21.0	119.0	98.1	100.4	98
3.	20' E of inlet 7-5	8	4' bg	2	24.2	22.1	117.9	94.9	99.9	95
4.	30' E of inlet 7-6	8	4' bg	2	24.6	22.1	118.5	95.1	99.9	95
5.	90' E of inlet 7-6	8	4' bg	2	22.2	22.1	120.0	98.2	99.9	98
6.	30' NE of inlet 7-7	8	3' bg	2	24.9	22.1	119.8	95.9	99.9	96
7.	30' SW of inlet 12-1	8	3' bg	2	24.8	22.1	118.7	95.1	99.9	95

Report of Tests continued on page 2

REPORT OF TESTS (continued)

PROJECT NO.: R20-17-261 GRIFFIN RILEY INVESTMENTS, LLC

DATE OF SERVICE: 02/14/2018

TEST NO	LOCATION	PROBE DEPTH	LIFT/ ELEV	M/D NO	FIELD MOISTURE (%)	OPTIMUM MOISTURE (%)	FIELD DENSITY (pcf) WET	FIELD DENSITY (pcf) DRY	MAXIMUM DENSITY (pcf)	DENSITY (% max)
8.	20' W of inlet 7-5	8	3' bg	2	22.3	22.1	120.5	98.5	99.9	99
9.	20' E of inlet 7-5	8	3' bg	2	23.0	22.1	120.8	98.2	99.9	98
10.	30' NE of inlet 7-6	8	3' bg	2	25.0	22.1	118.8	95.0	99.9	95
11.	75' NE of inlet 7-6	8	3' bg	2	24.3	22.1	119.6	96.2	99.9	96
12.	30' NE of inlet 7-7	8	2' bg	3	26.0	23.1	119.8	95.1	96.7	98
13.	70' NE of inlet 7-7	8	2' bg	2	24.9	22.1	121.9	97.6	99.9	98
14.	50' SW of inlet 7-5	8	2' bg	2	24.3	22.1	121.4	97.7	99.9	98
15.	20' SW of inlet 7-5	8	2' bg	2	25.1	22.1	120.7	96.5	99.9	97
16.	30' NE of inlet 7-6	8	1' bg	2	23.3	22.1	123.1	99.8	99.9	100
17.	70' NE of inlet 7-6	8	1' bg	3	26.1	23.1	121.2	96.1	96.7	99
18.	30' NE of inlet 7-7	8	on grade	3	25.9	23.1	115.8	92.0	96.7	95
19.	40' SW of inlet 7-5	8	on grade	1	20.7	21.0	118.8	98.4	100.4	98
20.	30' NE of inlet 7-6	8	on grade	3	26.0	23.1	122.2	97.0	96.7	100
21.	30' NE of inlet 7-7	8	on grade	2	24.4	22.1	122.7	98.6	99.9	99

Test results on this report meet project specifications as noted above.

ADDITIONAL COMMENTS:

The subgrade for the low volume material for building pad #4 was proofrolled with a loaded earth mover with no significant rutting or pumping observed.

Technician: ANDREW WILSON, SR. ENGR. TECHNICIAN

Report Distribution:

(1) cbeverlin@bdc-engrs.com
(1) jake@griffinriley.com
(1) matthew.munger@cityofLS.net
(1) mschlicht@es-kc.com
(1) srunyan@lukedraily.com
(1) thauschild@nspjarch.com
(1) tjwatreas@lukedraily.com

KANSAS CITY TESTING & ENGINEERING,

JIM BYRNES, R.G.
PROJECT MANAGER

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Kansas City Testing & Engineering, LLC
1308 Adams Street
Kansas City, KS 66103
Phone 913.321.8100
Fax 913.321.8181

REPORT OF IN-PLACE DENSITY

CLIENT: GRIFFIN RILEY INVESTMENTS, LLC
ATTN: JAKE LOVELESS
120 SE 30TH STREET
LEE'S SUMMIT MO 64082

PROJECT NO.: R20-17-261
REPORT NO.: K22282
DATE OF SERVICE: 02/15/2018
AUTHORIZATION: JAKE LOVELESS
REPORT DATE: 02/19/2018

PROJECT: THE RESIDENCES @ ECHELON
MO 291 & 50
LEE'S SUMMIT, MO

SERVICES: Perform in-place density and moisture content tests to determine the degree of field compaction.

PROJECT DATA

CONTRACTOR: LUKE DRAILY CONST

	DENSITY	MOISTURE
METHOD OF TEST:	ASTM D6938	ASTM D3017
SPECIFICATION:	95% Min	-1 to +3% of Opt

GAUGE: Troxler 3440
GAUGE SERIAL NO.: 15277
STANDARD COUNTS
MOISTURE - CURRENT: 713 PREVIOUS: 715
DENSITY - CURRENT: 1494 PREVIOUS: 1487
TEST MODE: Direct Transmission
PROBE DEPTH: 8

M/D #	TEST OF	MATERIALS	MOISTURE/DENSITY RELATIONS OPTIMUM MOISTURE %	MAXIMUM DENSITY pcf	REFERENCE REPORT
1.	STANDARD PROCTOR	GRAY SILTY CLAY	21.0	100.4	K21465
2.	STANDARD PROCTOR	REDDISH BROWN SILTY CLAY	23.1	96.7	K21466
3.		LIMESTONE SCREENINGS	9.1	131.4	

REPORT OF TESTS

TEST NO	LOCATION	PROBE DEPTH	LIFT/ ELEV	M/D NO	FIELD MOISTURE (%)	OPTIMUM MOISTURE (%)	FIELD DENSITY (pcf) WET	DRY	MAXIMUM DENSITY (pcf)	DENSITY (% max)
1.	NE corner bldg #5	8	soil gr	1	21.6	21.0	122.9	101.1	100.4	101
2.	E center of bldg #5	8	soil gr	2	25.9	23.1	116.2	92.3	96.7	95
3.	SE corner bldg #5	8	soil gr	1	20.1	21.0	116.4	96.9	100.4	97
4.	SW corner bldg #5	8	soil gr	1	20.3	21.0	116.8	97.1	100.4	97
5.	W center bldg #5	8	soil gr	1	20.6	21.0	122.0	101.2	100.4	101
6.	SW corner bldg #5	8	soil gr	1	20.3	21.0	120.4	100.1	100.4	100
7.	SE corner bldg #4	8	1' blg	3	11.1	9.1	139.5	125.6	131.4	96
8.	SW corner bldg #4	8	1' blg	3	8.5	9.1	139.6	128.7	131.4	98

Report of Tests continued on page 2

PROJECT NO.: R20-17-261 GRIFFIN RILEY INVESTMENTS, LLC

DATE OF SERVICE: 02/15/2018

TEST NO	LOCATION	PROBE DEPTH	LIFT/ ELEV	M/D NO	FIELD MOISTURE (%)	OPTIMUM MOISTURE (%)	FIELD DENSITY (pcf) WET	FIELD DENSITY (pcf) DRY	MAXIMUM DENSITY (pcf)	DENSITY (% max)
9.	E center bldg #4	8	1' blg	3	8.0 *	9.1	139.5	129.2	131.4	98
10.	SW corner bldg #4	8	.5' blg	3	7.6 *	9.1	142.7	132.6	131.4	101
11.	SE corner bldg #4	8	.5' blg	3	9.0	9.1	144.5	132.6	131.4	101
12.	E center bldg #4	8	.5' blg	3	8.4	9.1	145.1	133.9	131.4	102
13.	W center bldg #4	8	.5' blg	3	7.0 *	9.1	139.1	130.0	131.4	99
14.	NW corner bldg #4	8	.5' blg	3	7.8 *	9.1	135.0	125.2	131.4	95
15.	NE corner bldg #4	8	.5' blg	3	7.5 *	9.1	138.1	128.5	131.4	98
16.	SW corner bldg #5	8	1' blg	3	5.5 *	9.1	133.2	126.3	131.4	96
17.	SE corner bldg #5	8	1' blg	3	7.0 *	9.1	138.6	129.5	131.4	99
18.	E center bldg #5	8	1' blg	3	8.2	9.1	145.7	134.7	131.4	103
19.	W center bldg #5	8	1' blg	3	8.8	9.1	146.9	135.0	131.4	103
20.	NW corner bldg #5	8	1' blg	3	7.6 *	9.1	136.8	127.1	131.4	97
21.	NE corner bldg #5	8	1' blg	3	7.5 *	9.1	139.9	130.1	131.4	99
22.	F.2-1.5	8	9' bsg	2	23.0	23.1	116.2	94.5	96.7	98
23.	F.2-1.5	8	8' bg	1	20.0	21.0	115.3	96.1	100.4	96
24.	NE corner bldg #4	8	on lime gr	3	6.9 *	9.1	135.9	127.1	131.4	97
25.	NW corner bldg #4	8	on lime gr	3	9.4	9.1	146.2	133.6	131.4	102
26.	W center bldg #4	8	on lime gr	3	5.7 *	9.1	139.1	131.6	131.4	100
27.	E center bldg #4	8	on lime gr	3	7.7 *	9.1	142.6	132.4	131.4	101
28.	SE corner bldg #4	8	on lime gr	3	8.1	9.1	147.1	136.1	131.4	104
29.	SW corner bldg #4	8	on lime gr	3	7.1 *	9.1	142.2	132.8	131.4	101
30.	Storm sewer 55' E of inlet 13-1	8	3' bg	1	23.0	21.0	120.9	98.3	100.4	98
31.	Storm sewer 30' W of inlet 7-8	8	3' bg	1	22.9	21.0	123.5	100.5	100.4	100
32.	F.2-1.5	8	7' bg	2	22.9	23.1	114.9	93.5	96.7	97
33.	Storm sewer 75' E of inlet 13-1	8	1' bg	1	23.1	21.0	122.7	99.7	100.4	99
34.	SW corner bldg #5	8	.5' blg	3	8.4	9.1	148.7	137.2	131.4	104
35.	SE corner bldg #5	8	.5' blg	3	7.6 *	9.1	144.6	134.4	131.4	102
36.	E center bldg #5	8	.5' blg	3	7.5 *	9.1	144.6	134.5	131.4	102
37.	W center bldg #5	8	.5' blg	3	8.9	9.1	148.0	135.9	131.4	103
38.	NW corner bldg #5	8	.5' blg	3	6.0 *	9.1	133.7	126.1	131.4	96
39.	NE corner bldg #5	8	.5' blg	3	7.7 *	9.1	138.9	129.0	131.4	98
40.	60' E of inlet 13-1 storm sewer	8	on grade	1	22.4	21.0	123.3	100.7	100.4	100

Report of Tests continued on page 3

PROJECT NO.: R20-17-261 GRIFFIN RILEY INVESTMENTS, LLC

DATE OF SERVICE: 02/15/2018

TEST NO	LOCATION	PROBE DEPTH	LIFT/ ELEV	M/D NO	FIELD MOISTURE (%)	OPTIMUM MOISTURE (%)	FIELD DENSITY (pcf) WET	FIELD DENSITY (pcf) DRY	MAXIMUM DENSITY (pcf)	DENSITY (% max)
41.	Storm sewer 30'W of inlet 7-8	8	1' bg	2	26.0	23.1	119.4	94.8	96.7	98
42.	SW corner bldg #5	8	on lime gr	3	9.7	9.1	143.3	130.6	131.4	99
43.	SE corner bldg #5	8	on lime gr	3	10.7	9.1	146.3	132.2	131.4	101
44.	E center bldg #5	8	on lime gr	3	8.4	9.1	138.0	127.3	131.4	97
45.	W center bldg #5	8	on lime gr	3	10.5	9.1	144.4	130.7	131.4	99
46.	F.2-1.5	8	6' bg	1	25.1 *	21.0	119.7	95.7	100.4	95
47.	NE corner bldg #5	8	on lime gr	3	7.7 *	9.1	140.7	130.6	131.4	99
48.	NE corner bldg #5	8	on lime gr	3	8.5	9.1	141.1	130.0	131.4	99

An asterisk (*) appears next to test results which do NOT meet the project specifications as noted above.

ADDITIONAL COMMENTS:

Technician: ANDREW WILSON, SR. ENGR. TECHNICIAN

Report Distribution:

(1) cbeverlin@bdc-engrs.com
(1) jake@griffinriley.com
(1) matthew.munger@cityofLS.net
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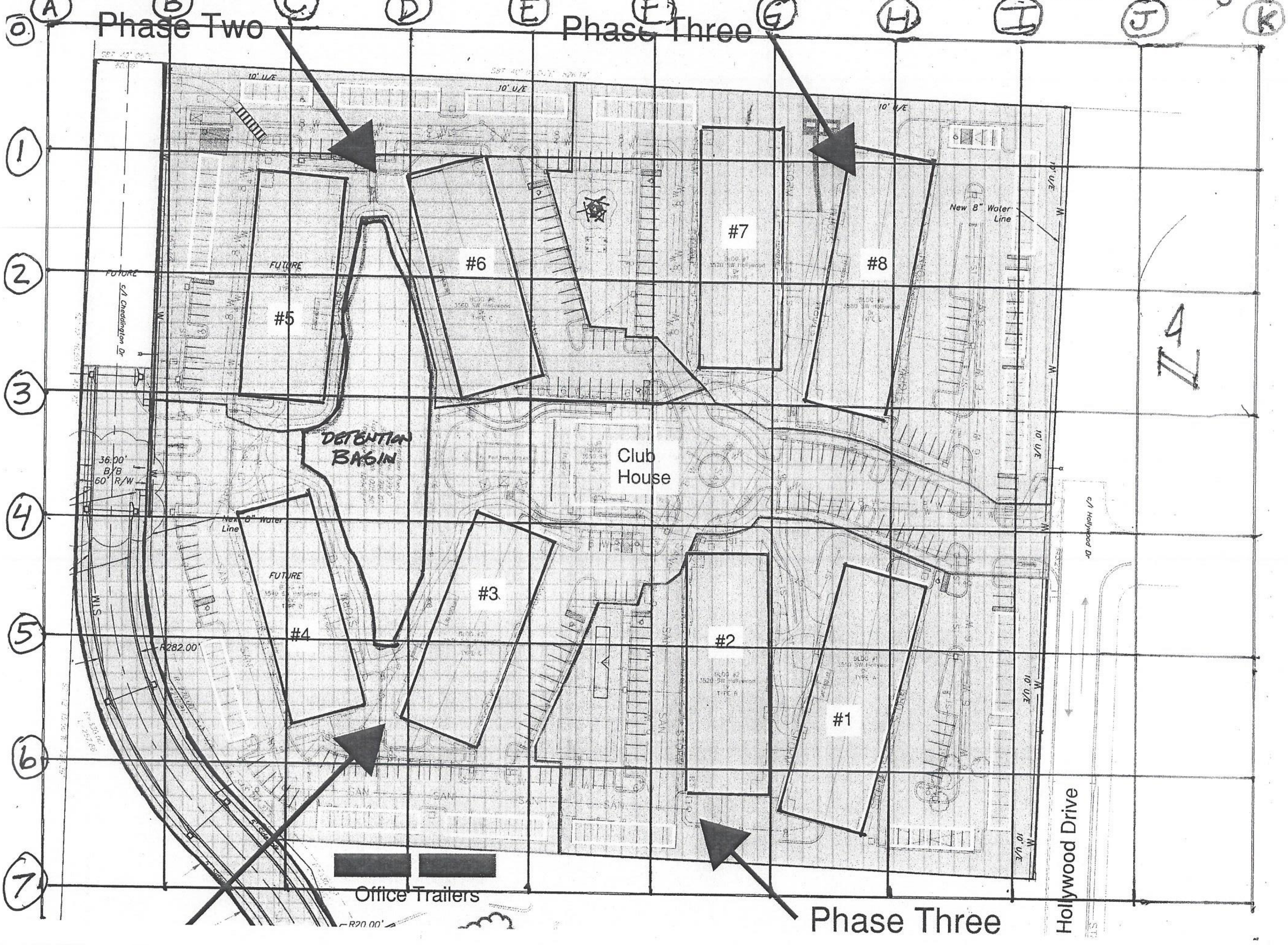
KANSAS CITY TESTING & ENGINEERING,

JIM BYRNES, R.G.
PROJECT MANAGER

DENSITY TEST LOCATION GRID
RESIDENSES AT ECHELON

Exhibit "C" - Schedule and Phasing



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Fax 913.321.8181

REPORT OF IN-PLACE DENSITY

CLIENT: GRIFFIN RILEY INVESTMENTS, LLC
ATTN: JAKE LOVELESS
120 SE 30TH STREET
LEE'S SUMMIT MO 64082

PROJECT NO.: R20-17-261
REPORT NO.: K22316
DATE OF SERVICE: 02/16/2018
AUTHORIZATION: JAKE LOVELESS
REPORT DATE: 02/19/2018

PROJECT: THE RESIDENCES @ ECHELON
MO 291 & 50
LEE'S SUMMIT, MO

SERVICES: Perform in-place density and moisture content tests to determine the degree of field compaction.

PROJECT DATA

CONTRACTOR: LUKE DRAILY CONST

	DENSITY	MOISTURE
METHOD OF TEST:	ASTM D6938	ASTM D3017
SPECIFICATION:	95% Min	-1 to +3% of Opt

GAUGE: Troxler 3440
GAUGE SERIAL NO.: 15277
STANDARD COUNTS
MOISTURE - CURRENT: 713 PREVIOUS: 713
DENSITY - CURRENT: 1494 PREVIOUS: 1485
TEST MODE: Direct Transmission
PROBE DEPTH: 8

M/D #	TEST OF	MATERIALS	MOISTURE/DENSITY RELATIONS: OPTIMUM MOISTURE %	MOISTURE/DENSITY RELATIONS: MAXIMUM DENSITY pcf	REFERENCE REPORT
1.	STANDARD PROCTOR	YELLOWISH BROWN SILTY CLAY	19.0	102.8	K21468
2.	STANDARD PROCTOR	GRAY SILTY CLAY	21.0	100.4	K21465
3.	STANDARD PROCTOR	REDDISH BROWN SILTY CLAY	23.1	96.7	K21466

REPORT OF TESTS

TEST NO	LOCATION	PROBE DEPTH	LIFT/ ELEV	M/D NO	FIELD MOISTURE (%)	OPTIMUM MOISTURE (%)	FIELD DENSITY (pcf) WET	FIELD DENSITY (pcf) DRY	MAXIMUM DENSITY (pcf)	DENSITY (% max)
1.	C.7-1	8	4.5' bg	1	19.7	19.0	128.8	107.6	102.8	105
2.	D-1	8	7' bg	1	19.7	19.0	125.8	105.1	102.8	102
3.	Storm sewer 5' S of inlet 7-4	8	3' bg	2	20.5	21.0	121.8	101.1	100.4	101
4.	E-2	8	6' bg	3	24.2	23.1	118.1	95.1	96.7	98
5.	F-1	8	6' bg	3	24.0	23.1	116.1	93.6	96.7	97
6.	D.1-1.1	8	5' bg	2	23.1	21.0	121.6	98.8	100.4	98
7.	D.5-1.4	8	5' bg	2	23.9	21.0	121.3	97.9	100.4	98

Report of Tests continued on page 2

PROJECT NO.: R20-17-261 GRIFFIN RILEY INVESTMENTS, LLC

DATE OF SERVICE: 02/16/2018

TEST NO	LOCATION	PROBE DEPTH	LIFT/ ELEV	M/D NO	FIELD MOISTURE (%)	OPTIMUM MOISTURE (%)	FIELD DENSITY (pcf) WET	FIELD DENSITY (pcf) DRY	MAXIMUM DENSITY (pcf)	DENSITY (% max)
8.	Sanitary sewer to clubhouse 80' from W end	8	3' bg	3	25.9	23.1	120.1	95.4	96.7	99
9.	Sanitary sewer to clubhouse 30' from W end	8	3' bg	3	25.5	23.1	120.2	95.8	96.7	99
10.	Sanitary sewer to clubhouse 30' from W end	8	1' bg	2	22.7	21.0	121.5	99.0	100.4	99
11.	Sanitary sewer to clubhouse 30' from W end	8	on grade	2	23.9	21.0	120.2	97.0	100.4	97
12.	Sanitary sewer to clubhouse 80' from W end	8	on grade	2	23.1	21.0	119.8	97.3	100.4	97
13.	D.5-1.4	8	4' bg	3	25.1	23.1	116.5	93.1	96.7	96
14.	D.1-1.1	8	4' bg	3	24.1	23.1	115.4	93.0	96.7	96

Test results on this report meet project specifications as noted on page 1.

ADDITIONAL COMMENTS:

Technician: ANDREW WILSON, SR. ENGR. TECHNICIAN

Report Distribution:

(1) cbeverlin@bdc-engrs.com
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(1) tjwatreas@lukedraily.com

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JIM BYRNES, R.G.
PROJECT MANAGER

DENSITY TEST LOCATION GRID
RESIDENCES AT ECHELON

Exhibit "C" - Schedule and Phasing